

Work Order ID 149060

Tuesday, July 19, 2016 2:40:56 PM

149060

Page 1

Item ID: D4634-5 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Aft, Center Ceiling Panel
 Start Date: 7/12/2016 Start Qty: ~~4.00~~ ****1*** Cust Item ID:
 Required Date: 7/19/2016 Req'd Qty: ~~4.00~~ ****1*** *2.00* Customer:
 Reference:

Approvals: Process Plan: **DAS 21** Date: **JUL 19 2016** Tooling: Date: Run Start ***NR1***
 QC: **9-89** Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4634	G

100		0.00				DAS 07			
100	HAND FINISHING THERMOFORMING					9-89			
Thermoform	Memo	0.11				<i>2</i>			
Thermoforming Machine	Cut Blanks								<i>16/07/28</i>

105		0.00				DAS 07			
105	Dry Material					9-89			
HandThermo	Memo	0.00				<i>2</i>			
Hand Finishing Thermoforming	Dry Sheet as per QSI022 POLYCARBONATE								<i>16/07/28</i>

Temp: **245 deg**
 Time IN: **5:00 PM**
 Time OUT: **6:00 AM**

JUL 27 2016

Per.....

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																																			
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00				DAS			
110	THERMOFORMING MACHINE					07			
Thermoform	Memo	0.28				9-89			
Thermoforming Machine	Thermoform as per Dwg. D4634-5 and Folio FTA146					2			16/07/28
	Dwg. Rev. <u>PGH</u>								
	Folio Rev. <u>F</u>								
	NOTE: Check moulds prior to using to ensure proper placement of add-ons.								
	Visually inspect for proper formation and texture								
130		0.00							DAS
130	HAND FINISHING THERMOFORMING								07
Thermoform	Memo	1.54							9-89
Thermoforming Machine	Trim to Finished Dimensions					2			16/08/12

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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140	QC6- Inspect dimensions to drawing Dimensional Inspection	0.00							DAS 07 9-89
140						x 2			16/08/15
QC	Memo	0.00							
Quality Control	Fill out Inspection Sheet Rev A								
150	QC5- Inspect part completeness to step on W/O	0.00							DAS 27 9-89
150									AUG 15 2016
QC	Memo	0.01							
Quality Control									
160	Packaging	0.00							DAS 27 9-89
160									AUG 15 2016
Packaging	Memo	0.00							
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PPR149079
PPR149080

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Run Start ***NR1***

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DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.07

DAS
21
9-89**AUG 19 2016**

Quality Control

MF
16-8-17

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Picklist Print

Tuesday, July 19, 2016 2:41:00 PM

Page 1

Work Order ID: 149060

149060

Parent Item: D4634-5

D4634-5

Parent Item Name: Aft, Center Ceiling Panel

Start Date: 7/12/2016

Required Date: 7/19/2016

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev. A 12/08/09 New Issue DL
12/11/08 Document release DL VERIFIED BY:JLM
Dwg Update DL verf: DD
DL
DL
DL
IPP Rev B
IPP Rev C 13/07/09
IPP Rev D Dwg Update 13/12/23
IPP REV E Dwg update 14/01/09
IPP Rev F Dwg. update 14/02/03
IPP Rev G Dwg. Update 15/01/27 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	380.9000	17.33	69.32			DAS 07 9-89
MI FXS 093-F6006-07									**				
GE PLASTICS LEXAN SHEET (Grey)													

Location

Loc Qty

Loc Code

MAT023

380.9

m129738

380.9

35-29 A

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
1A0 50 0F-B									
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

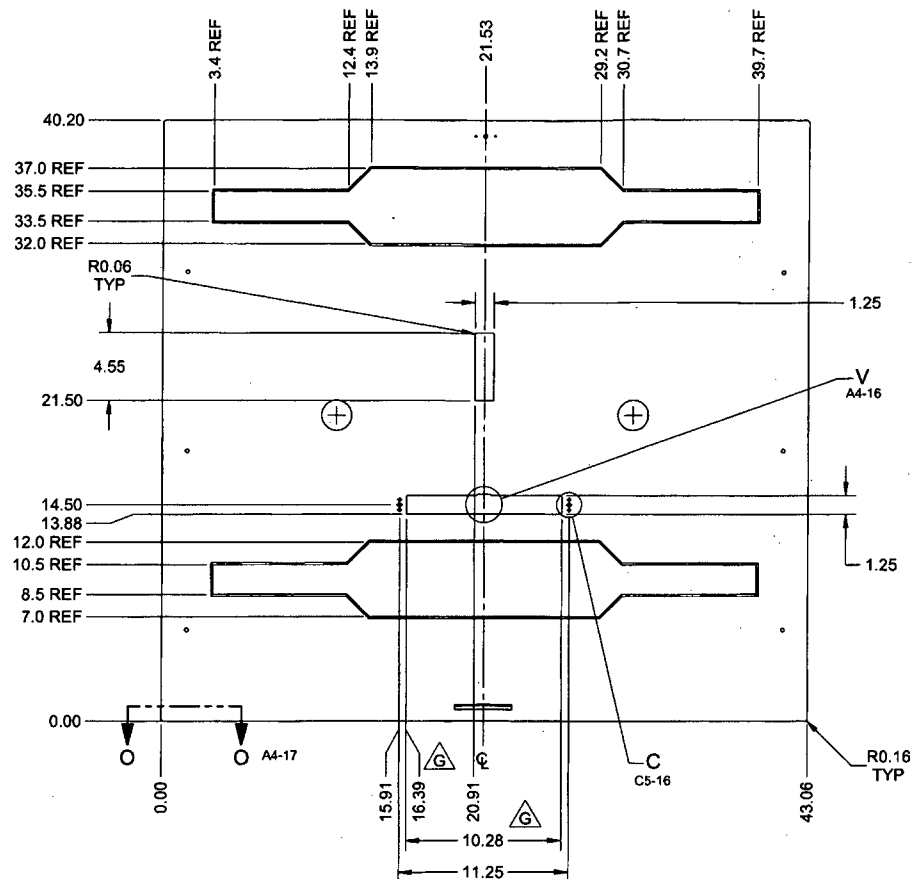
DART AEROSPACE LTD		Work Order: 199060
Description: Aft Center Ceiling Panel		Part Number: D4634-5
Inspection Dwg: D4634	Rev: 86 04	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
10.20	+/-0.030	10.17"	✓			
11.25	+/-0.030	11.25"	✓			
15.91	+/-0.030	15.9"	✓			
1.25	+/-0.030	1.25"	✓			
4.55	+/-0.030	4.55"	✓			
21.50	+/-0.010	21.50"	✓			
13.88	+/-0.030	13.88"	✓			
1.25	+/-0.030	1.23"	✓			
21.53	+/-0.030	21.53"	✓			
12.00	+/-0.030	12.00"	✓			
24.00	+/-0.030	24.00"	✓			
20.50	+/-0.030	20.5"	✓			
Ø0.250	+0.005/-0.001	Ø0.25"	✓			
39.75	+/-0.030	39.75"	✓			
1.300	+/-0.010	1.3"	✓			
Ø0.129	+0.005/-0.001	Ø0.129"	✓			
Ø0.250	+0.005/-0.001	Ø0.251"	✓			
11.66	+/-0.030	11.66"	✓			
31.41	+/-0.030	31.41"	✓			
Ø2.030	+0.012/-0.001	Ø2.03"	✓			
3.80	+/-0.030	3.78"	✓			
0.63	+/-0.030	0.63"	✓			
0.50	+/-0.030	0.52"	✓			
1.05	+/-0.030	1.07"	✓			

Measured by: DAS 07 9-89		Audited by: DAS 27 9-89		Preliminary Approval:	
Date: 16/08/15		Date: AUG 15 2016		Date:	

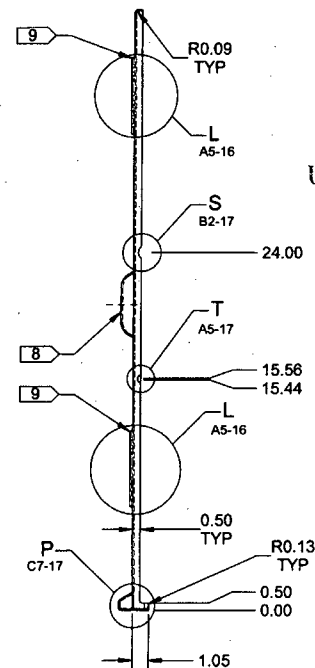
Rev	Date	Change	Revised by	Approved
A	14.07.29	New Issue	KJ	



NOTES:

- 1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK (REF DART SPEC MLEXS.093-F6006-07)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 7.39 lbs
- 8) TEXTURE ON THIS SIDE
- 9) 0.14 RADIUS NOT SHOWN FOR CLARITY
- 10) DRILL & TRIM D4634-5 PER TOOL DT9838
- 11) THERMOFORM PER QSI 022 USING DT9846 TOOL
MIN. THICKNESS AFTER FORMING:
EDGES = 0.060
ELSEWHERE = 0.070
- 12) LOCATE $\phi 2.030$ AT CENTER OF PROTRUDED SURFACE AS SHOWN

D4634-5 AFT. CENTER CEILING PANEL



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WITHOUT NOTICE
WORK ORDER

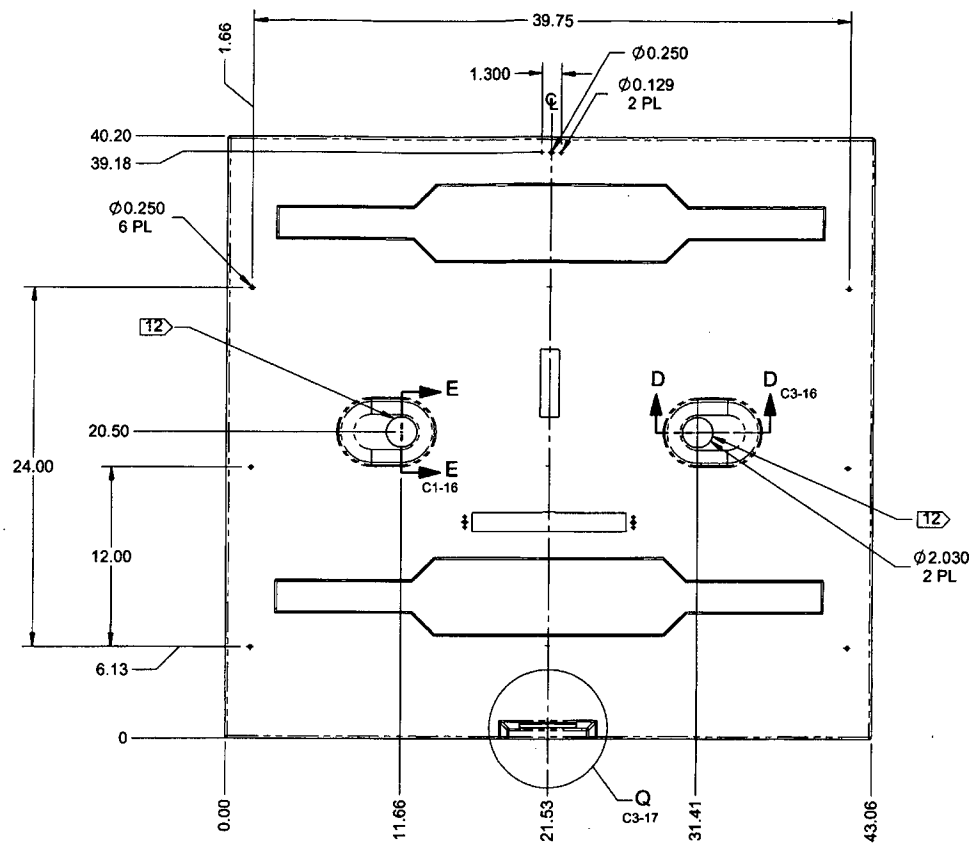
NO. 149060 MJS
16-07-19

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2015 JAN 26 *up*

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DRAWN	RF		
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	DL	D4634	SHEET 14 OF 17
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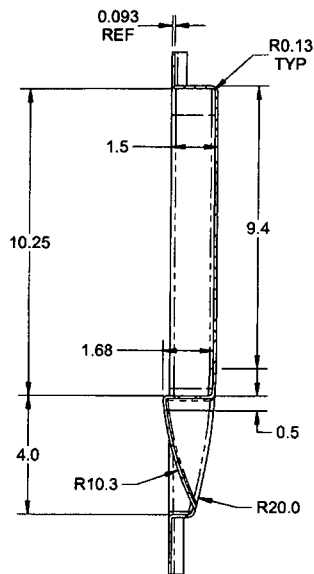
D4634-5 AFT, CENTER CEILING PANEL
AUXILIARY VIEW

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2015 JAN 26 *qp*

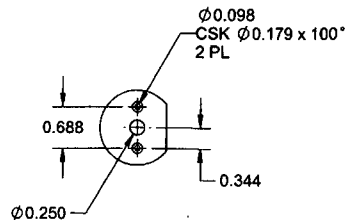
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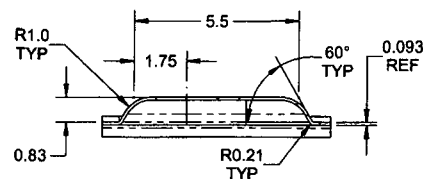
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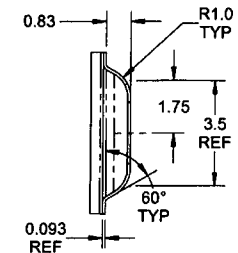
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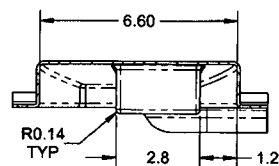
DETAIL C
SCALE 4X B7-10
B4-12
B4-14



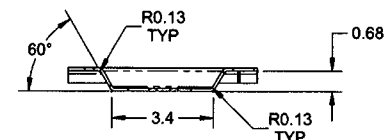
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C4-13
C4-15



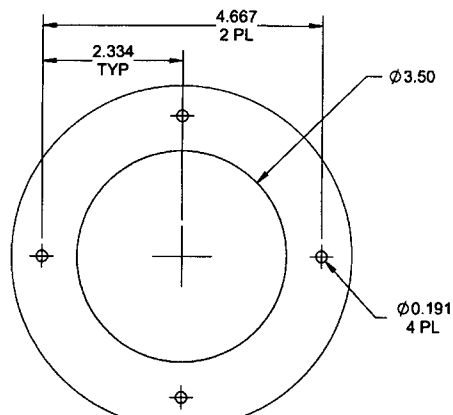
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C4-13
C5-15



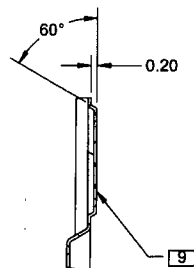
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SCALE 2X C5-11



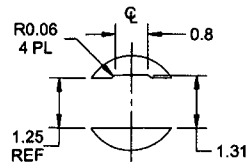
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DETAIL B
SCALE 4X B7-10
C2-13
B2-14
C2-14



DETAIL I
SCALE 4X TYP B2-13
C2-13
B2-14
C2-14



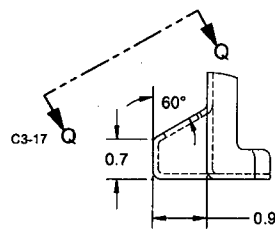
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SCALE 2X C4-10
B4-12
C4-14

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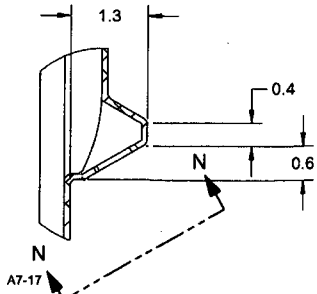
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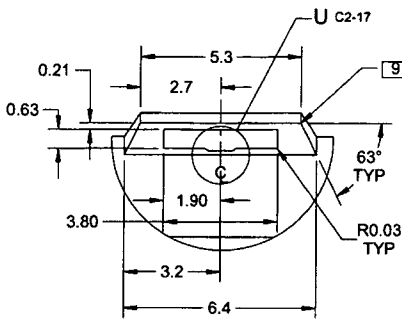
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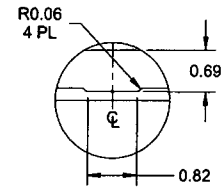
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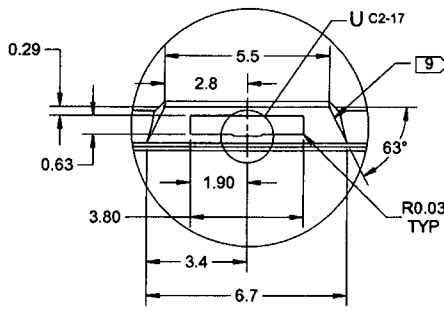
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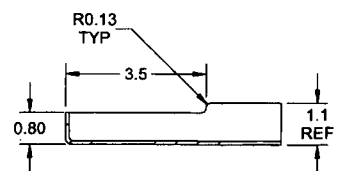
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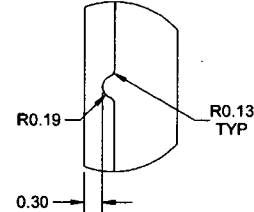
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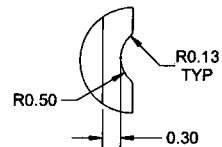
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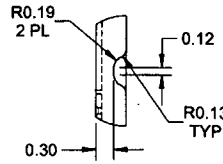
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DETAIL R B3-10
SCALE 4X



DETAIL S B3-10
SCALE 4X



DETAIL T C2-14
SCALE 4X

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